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ABSTRACT

This paper provides a progress report on a study of a new dental school that departs from the traditional approach to professional socialization by channeling its students into clinic experience early in the first year of training. Based upon data from the first 2 years of a 6-year longitudinal investigation, the study focuses on the first class to enroll at the school. The basic issue examined is the influence of early and extensive patient contact through structured clinic experience on students' professional orientations and self-conceptualizations. (Author)

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THE EFFECTS OF EARLY CLINIC EXPERIENCE UPON DENTAL STUDENTS: A STUDY OF PROFESSIONAL ROLE ADOPTION*

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This paper provides a progress report on a study of a new dental school which departs from the traditional approach to professional socialization by channeling its students into clinic experience early in the first year of training. Based upon data from the first two years of a six-year longitudinal investigation, it focuses upon the first class to enroll at the school. The basic issue examined in this paper is the influence of early and extensive patient contact through structured clinic experience upon students' professional orientations and self-conceptualizations.

RATIONALE

The theoretical genesis of this report may be seen in the work of Howard Becker and associates over a period of several years. Becker and Strauss (1956) concluded that occupational socialization is an ongoing, developmental process in which social structure influences the development of the personality and general orientation to work. Occupational socialization, therefore, is the product of a sequence of experiences within a social structure.

Becker and Carper (1956) suggested five mechanisms within the socialization process and identified the social referents through which each mechanism operates. Contact with these referents is mediated by

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the social structure. Suggested mechanisms are development of interest in a particular problem and pride in new skills, acquisition of a professional ideology, investment, internalization of motives, and sponsorship. Pertinent referents are informal peer groups, faculty, apprenticeship relations, the socializing agency as a whole, and practitioners of the occupation in general. From a study of graduate students in physiology, mechanical engineering and philosophy, Becker and Carper concluded that structural differences in the educational settings for the three disciplines contributed to the distinctive variations in the final products of the socialization process.

Finally, after an extensive investigation of medical students Becker et al. (1961) expressed the opinion that little or no change occurred in one major dimension of occupational socialization, the development of the professional self. This conclusion, which contradicts views expressed by Merton et al. (1957) from an earlier study, raises the question of what structures were missing or improperly sequenced for the development of the professional self within the educational milieu.

The foregoing review of research findings suggests that alterations of the structures that channel the process of occupational socialization will affect the results of that process. This paper concerns a basic structural alteration in professional education. Specifically, it deals with changes in the timing and degree of exposure to clinic experience on the part of dental students. Clinic experience or other supervised practical application of techniques and principles encountered in the classroom is a major component of professional education. It is typically introduced during the third and fourth years of training. The present study presents a contrast

to the traditional pattern. Its subjects are the first class at an innovative new school of dentistry where clinic activities begin early in the first year and continue until graduation.

Early clinic training represents a restructuring of professional socialization. While the effects of this change remain largely unknown, there are indications of what might be expected. Widely accepted theories in sociology and social psychology indicate that the necessity for adopting a new set of roles appropriate to the practitioner-patient relationship of the clinic would exert pressure upon the student to alter his views of self and occupation. Dramatic change in these attitudes and role identifications would reflect a departure from the traditional pattern. Becker (1961), Lortie (1959), Quarantelli and Helfrich (1967) and others have contended that students in professional schools tend to retain their student-trainee roles to the end of their educational careers. However, Kadushin (1969) has studied the effects upon music students of early practical experience in professional roles, and he suggests that such experience leads to greater satisfaction with and heightened evaluation of the occupation and increased self identification with the occupation.

Drawing upon existing theory and a limited body of research, this study advances the proposition that alteration of the structure of professional socialization through early introduction of clinic training will lead to changes in the outcome of the socialization process. Specific areas to be examined in assessing the effects of early clinic experience are students' evaluations of the profession and their perceptions of themselves relative to the profession.

METHOD

The data for this report were taken from the first two years of a projected six-year study at a new school of dentistry, focusing upon the initial class. Since the school is new, the number of subjects is rather small, twenty-three students and twenty-nine faculty. Although the limited number of subjects imposed certain limitations on data analysis, the reduced size also afforded greater opportunity for more detailed analysis of each respondent.

During the two years data were collected through self-report questionnaires, structured and unstructured interviews and extensive field observation. The students completed a general questionnaire at the beginning and the end of the first year and again at the end of the second year. The faculty form of this questionnaire was administered one month prior to the beginning of the first school term. Both the student and faculty forms of the general questionnaire followed the format of a similar instrument utilized by Quarantelli and Helfrich (1967) in their four-year investigation of dental students.

This report focuses upon three parts of the questionnaire: (a) questions concerning student and faculty attitudes about the profession of dentistry, (b) questions regarding selected dimensions of students' occupational self-conceptualizations and (c) questions about the influence that patients exerted on students' views of dentistry and patients.

With regard to attitudes about the profession of dentistry the students and the faculty were asked to respond to three Likert-type summated inventories concerning their judgments of the most salient advantages and disadvantages of dentistry and the most important characteristics of a "good" dentist. The subjects' responses to

these measures provided the foundation for a comparison of the students' views of dentistry with those of the faculty.

The judgments of the faculty on the three instruments were weighted and a summated score was derived for each item in the inventories. Based upon these scores, the items in each inventory were then rank ordered. The same procedure was followed for students' responses from each of three test administrations--at the beginning and the end of the first year and at the end of the second year.

Congruence between student and faculty judgments over the two years was determined by calculating Kendall rank order correlations between students' and faculty listings at the beginning and the end of the first year and again at the end of the second year. This procedure generated three coefficients of correlation for each of the three inventories. The nine resulting coefficients provided an indicator of the degree of association between the two groups' rank ordered judgments concerning three aspects of the dental profession at three points in time. The difference between the correlation coefficients for the faculty and the students' views at each point in time reflects the direction of changes in students' perceptions and represents the degree of increased or decreased congruence of students' views with those of the faculty.

In order to ascertain whether or not significant modifications occurred in students' evaluations of specific items the Wilcoxon matched pairs signed-ranks test was applied to the extent of change evidenced by each item within the three inventories. The results of this procedure furnished specific information about the nature of the changes in students' occupational attitudes.

To determine the degree of student identification with the concept of "dental student" or "dentist" a continuum self-rating scale was employed which ranged from 1.0, representing total student identity, to 10.0, representing total dentist identity. The subjects were asked at the beginning and end of the first year and again at the end of the second year to indicate where they saw themselves and where they perceived faculty and patients would place them on the continuum. A mean score was derived from the students' ratings at each point in time and a modified t-test for related samples in time series was employed to test for the statistical significance of any differences among these three mean scores. The Goodman and Kruskal gamma formula (1954) was also used to test for the degree of association between students placement of themselves and their perceived ratings for the faculty and patients.

These operational procedures provide the basis for determining whether or not significant alteration did occur in self-definitions and whether or not students' self-perceptions were significantly associated with projected evaluations of faculty and patients.

Data concerning patient influence on students' views of the dental profession and of patients were obtained through a series of open-ended items contained in the student general questionnaire. Content analysis of these responses at the ends of the first and second years of training offered a direct means of assessing the nature and extent of patient influence as perceived by students. The results from the Wilcoxon matched-pair, signed-ranks tests for significance of association between students' perceptions of themselves and their projected ratings by the faculty and patients, provide additional means of evaluation of this influence.

FINDINGS

Results from rank order correlations between student and faculty evaluations of the dental profession at the beginning and end of the first year and at the end of the second year are presented in Table I. Coefficients for the first year indicate that students' initial perceptions of the attributes of a good dentist more closely approximated those of the faculty than their views concerning the advantages and disadvantages of the profession. Judgments regarding the disadvantages of dentistry were only slightly less congruent but evaluations of the advantages diverged markedly.

During the first year students' orientations toward the disadvantages of dentistry evidenced the greatest alteration among the three areas of occupational attitudes, and this change was in the direction of heightened congruence with the faculty's views. Students' ratings of the characteristics of a good dentist underwent lesser but substantial modification over the year, again in the direction of increased consensus with the views of the faculty.

The students' perceptions concerning the advantages of dentistry were atypical of the basic trends noted in the other two checklists. Not only were their views extremely divergent from those of the faculty at the beginning of the year, but they remained virtually unchanged during the year.

TABLE I

Coefficients of Rank Order Correlation
Between Student and Faculty Perceptions
Of the Dental Profession at Three Points in Time

Inventory	September 1969	May 1970	May 1971
Characteristics of a good Dentist . . .	.66*	.78*(+.12)	.74*(-.04)
Disadvantages of Dentistry . . .	.55*	.75*(+.20)	.65*(-10)
Advantages of Dentistry . . .	.18	.17(-.01)	.15(-.02)

*--correlation significant at .01 level

The findings from the second year reflect a different pattern of change from that of the first year in that students' evaluations of all three areas of occupational attitudes demonstrated a slight trend toward decreased association with the views of the faculty. Within this general trend, ratings of the disadvantages of dentistry manifested the strongest decline in consensus with the faculty. Their opinions of the characteristics of a "good" dentist also became less congruent with faculty views but maintained the highest level of association of the three spheres of occupational attitudes. Students' evaluations of the most salient advantages of dentistry again remained virtually unchanged but did indicate a very slight movement toward greater disparity with faculty opinions. This dimension of the students' occupational orientation continued to be atypical of trends in the data in that the relationship between student and faculty ratings on this aspect of their professional orientations was at a markedly lower level of congruence than their responses to the other two checklists.

Following the analysis of the broad changes in the three evaluation inventories, attention may be directed to patterns of change among specific items within the checklists. The data relative to changes in students' rankings between the beginning and the end of the first year and between the end of the first and the second year for each item in the three inventories were tested for statistical significance by means of Wilcoxon matched-pairs signed-ranks test.

Of the fourteen items in the disadvantages of dentistry checklist, five changed at or beyond the .05 significance level during the first year. All five changed in the direction of increased importance. These items were (a) "the lack of appreciation by patients of the nonmechanical skills of the dentist;" (b) "the thinking by people that the dentist is not much more than a mechanic;" (c) "working in a dirty part of the body;" (d) "the fact that the total responsibility for the work done is solely that of the dentist himself;" and (e) "the heavy cost of the initial investment in setting up practice."

No statistically significant changes in student evaluations were found for any of the fourteen items in the advantages of dentistry inventory during the first year, but eight of the sixteen attributes listed in the characteristics of a good dentist checklist did manifest significant alteration at the .05 level or beyond. Six of the eight characteristics reflected changes toward greater perceived importance and consisted of (a) "skillful management of time," (b) "ability to handle people," (c) "recognition of one's own limitations," (d) "emotional stability," (e) "dignified appearance," and (f) "good business sense." The two characteristics that declined in importance were (a) "outgoing and extrovert personality," and (b) "good research ability."

A review of the items that underwent significant changes in tudent's evaluation during the first year reveals that many of hem are integrally associated with the clinic experiences. vidence of the relationship between the changes in students' udgments and their clinic experience is apparent in the increased alience of such statements as "the lack of appreciation by atients of the nonmechanical skills of the dentist" and "the hinking by people that the dentist is not much more than a mechanic." tudents' participation in the clinics obviously offered opportunity o encounter negative evaluations of patients regarding the dental ractitioner as documented in other investigations. Extensive bservation at the dental clinic and interviews with students rovided support for the conclusion that the subjects did experience egative evaluations among the patients they treated and that this xperience did affect their views of dentistry.

Other statements concerning the disadvantages of dentistry, such as "working in a dirty part of the body," whcih increased in salience also point to the relevance of clinic experience. The students did encounter a variety of severe dental problems in their clinic work which constituted a source of reality shock for many of them and helped to foster an image of the mouth as a dirty part of the body.

In the characteristics of a good dentist inventory, the heightened importance of such attributes as "skillful management of time," "ability to handle people," "recognition of one's own limitations," and "a dignified appearance" all point to the probable influence of clinic experience upon the students' perceptions by the very nature of the characteristics themselves. All of these

characteristics are closely tied with dentist-patient role relations and are essential for the successful enactment of the role of the dentist. Observations of the clinic activities and data gathered from unstructured interviews generally support this pattern of influence.

In marked contrast to these findings an analysis of the changes in student orientations occuring in the second year failed to reveal any statistically significant alterations in student judgments on any single item within the three inventories. Even though no statistically significant changes were found, some moderate adjustments in their perceptions were evidenced. These modifications were limited on the characteristics of a good dentist and the advantages of dentistry checklists. The changes in the correlation coefficients for these two dimensions appear to reflect a general trend toward the stabilization of responses with only a limited number of minor adjustments occurring in the rank orderings. Students' ratings of the characteristics of a good dentist seem to be establishing a plateau at a moderately high level of congruence with the faculty's views, while their evaluations of advantages of dentistry remain constant at a low level of consensus with the faculty rankings.

A departure from this stabilizing trend is seen in responses pertaining to the disadvantages of dentistry. The subjects' orientations in this area manifested the highest degree of modification of the three inventories as indicated by a reduction in the correlation coefficient for this inventory from .75 at the end of the first year to .65 at the end of the second year.

While no single item within the disadvantages checklist changed sufficient to satisfy the Wilcoxon test of significance, there were re-orderings of eleven of the fourteen statements. Of these eleven items eight became more unlike the judgments of the faculty and three changed toward greater congruence with the faculty's views. The latter exhibited the least change of the eleven statements. The four items that displayed the greatest change were in the direction of lessening consensus with faculty's and included: (a) "the lack of opportunity to make a contribution to basic knowledge," (b) "having to inject needles into people," (c) "the fact that the total responsibility for the work done is solely that of the dentist himself," and (d) "working with people rather than just things." The first two of these statements were viewed as more important disadvantages, and the last two decreased in importance. Although these findings are rather limited and thus largely inconclusive, there is some indication that the items demonstrating some change during the second year were, as in the previous year, closely associated with the students' clinic experiences.

More direct evidence relating to the students' changing perceptions is provided by their responses to open-ended questions concerning how contacts with patients affected their attitudes about dentistry and patients. At the end of the first year 19 out of 23 respondents reported changes in their views of patients that were in some sense positive, two indicated no change, and two others reflected negative changes.

Three themes recur among the statements reflecting a more positive attitude toward patients. They may be summarized as

follows, with the number of statements fitting each theme indicated in parentheses: Increasing regard for patients as persons rather than objects for learning and practice (6); growing respect for patients and sensitivity to their problems (6); and increasing comprehension of the need patients have for the services that clinicians can offer (4). The data relative to how students' clinic experiences had influenced their ideas about dentistry revealed that six subjects reported little or no change; fifteen recorded positive changes; two cited negative changes. The categories of positive change statements and number in each category are as follows: Heightened appreciation for the services dentistry can provide and for the profession in general (10); enhanced understanding of the challenges and difficulties involved in dentistry (7); and greater enthusiasm for the practice of dentistry (3). Negative changes reflected disappointment with the extent of dental care being provided in the face of great need and the feeling that dentistry probably had been a poor occupational choice.

The results from the second year indicated that 18 of the 21 respondents for whom there were complete sets of data noted positive changes while three cited no change. Response categories and frequencies virtually duplicate the pattern for the previous year.

The data pertaining to students' self-conceptualizations reveal that the mean score of their responses at the beginning of the first year was 1.17, where 1.0 represents complete identification with the concept of dental student. By the end of the first year, however, the students had substantially altered their definitions of themselves such that their mean score on the self-concept scale was 3.08.

Utilizing the modified formula of the t-test for related samples in the time series, the difference between these two means was found to be statistically significant at the .001 level.

An examination of student self-conceptualizations at the end of the second year indicates that the subjects had again modified their views, as reflected by a mean scale score of 5.18. Application of the modified t-test revealed that the difference between students' mean scores at the end of the first year and the end of the second year was also statistically significant at the .001 level.

The Goodman-Kruskal gamma formula was employed to determine whether changes in students' self-perceptions over the two-year period were significantly associated with the changes they perceived in the evaluations of faculty and patients. The comparison of changes in self placement with changes in perceived faculty rating produced a gamma of .81. There was a .58 gamma association between changes in self evaluations and changes in perceived patient assessments. Following interpretation instructions by Goodman and Kruskal that the gamma is directly comparable to the correlation coefficient, it is determined that the self-faculty gamma of .81 is statistically significant at the .01 level and the self-patients gamma of .58 is significant at the .05 level.

Overall, a basic trend in students' self-conceptualizations does emerge. During the course of the two years of study, the subjects moved steadily toward greater identification with the concept of dentist rather than that of dental student.

Additional support for this view is found in the students' responses to the open-ended questions designed to assess students' evaluations of the impact of clinic experiences upon their views of

dentistry and patients previously discussed in the findings. In earlier portions of this paper several statements by students were categorized under the general theme of "growing respect for patients and sensitivity to their problems." Of these responses, eight reflected comments connoting changing views of self in relation to patients. Specifically, these statements expressed feelings of being more at ease and less afraid of patients, more confident about technical competency in treating patients, and more certain about ability to handle interpersonal doctor-patient relationships. These findings along with data derived from informal interviews with the students suggest that the structured opportunity for the enactment of the role of dentist very early in their training fostered heightened self-conceptualizations of themselves as dentists.

DISCUSSION AND CONCLUSIONS

Research findings indicate changes on the part of subjects of this study in the focal areas of professional orientation and identification with the occupation. In each case there is evidence that regular exposure to patients in the quasi practitioner-client relationship of the clinic setting played a part in effecting these changes. A more definitive interpretation of the findings in both areas is now in order.

Rank order correlation coefficients between faculty and student responses on three inventories dealing with perceptions of the dental profession show a significant movement by the students toward congruence with the faculty during the first year. Only on items pertaining to the advantages of dentistry did students remain distinctively different and unchanging.

Examination of results of Wilcoxon statistical analyses of the inventories reveals that the items which increased most in importance in the evaluations of students are strongly linked to their clinic experience. Five items from the disadvantages of dentistry checklist changed significantly in student evaluations during the first year. All increased in salience for the subjects and all reflect the influence of the clinic. An obvious interpretation is that some of the negative aspects of clinic work--patients' unflattering views of dentistry, cost of equipment, the "dirtiness" of the mouth--provided a reality shock early in the subjects' educational careers. Thus, they moved to more realistic, differentiated views of aspects of the profession, views more like those of the finished professionals on the faculty. This interpretation is consonant with the views of Hughes (1958) and others but the pattern emerges at a comparatively early stage in the occupational socialization process among subjects of this study because the variation of traditional structure through early clinic training.

The above interpretation is reinforced by observation and interview data. The subjects did encounter difficult oral health problems and patients whose views of dentistry were less positive than the popular professional image. One faculty informant noted that the students' early clinic experience centered around "oral disease control" and hence they became "dirty-mouth oriented" from the beginning. Perhaps as a result of this encounter with occupational reality one student expressed doubt that dentistry had been a good choice of vocations. Thus, there is substantial

support for the conclusion that a more realistic appraisal of the occupation is associated with clinic experience.

Significant change items from the characteristics of a good dentist inventory fall into a similar pattern of realism and practicality. The logical connection between clinic experience and such characteristics as "ability to handle people" and "skillful management of time" seems apparent. These changes suggest that clinic experience exerted an influence upon the subjects to redefine their views of the profession, placing greater emphasis upon treatment aspects of the dentist's roles.

Data from the occupational orientation inventories for the second year are more difficult to interpret. Rank order correlations between student and faculty responses on the characteristics of a good dentist and advantages of dentistry checklists vary only slightly from those computed at the end of the previous year. A parallel comparison of the coefficients for the disadvantages of dentistry inventory indicates a somewhat decreased degree of agreement of student views with those of the faculty. Detailed analysis of this inventory revealed no statistically significant change for any item according to Wilcoxon tests but numerous small changes resulted in shifts in rank ordering which are reflected in a smaller correlation coefficient.

These second year findings indicate a plateauing effect or stabilization in some areas of occupational orientation. This interpretation is rather clearly indicated by data from the characteristics of a good dentist checklist, suggesting a stabilization of professional role definitions. Lack of change at this time does not necessarily imply that factors which produced earlier changes have ceased to operate. It is reasonable to expect

decreasing change if previous adjustments of role definitions and attitudinal orientations had reduced the strain toward normative consistency with structurally prescribed significant others. Shifts toward consensus with faculty norms and adjustments of role definitions growing out of encounters with clinic patients during the first year may have limited the amount of further change open to the students under the existing set of cultural constraints.

Varied evidence supports the conclusion that the clinic program continued to be a potent structural component influencing students' role definitions. Clinic or treatment oriented items evidenced the most dramatic changes during the first year, moving to the top of the rank order of importance. In the second year these items remained the most salient on the checklist in the students' evaluations. Responses to open-ended questionnaire items about the impact of the clinic upon views of patients and the profession show that most of the subjects felt they had been affected by their clinic experiences and that many of the changes cited had to do with professional role redefinitions and altered occupational orientations. The tendency to note the same sorts of effects in the second year as in the first might be offered as further evidence for stabilization of influence and results.

Concerning the static responses to the advantages of dentistry inventory, the most plausible explanation is that none of the structures of the socializing agency had major impact upon this orientational sphere. The subjects retained high evaluation of personal rewards and relatively lower regard for more ideological factors. It should be noted that clear opportunity for students to test the validity of some of these views probably will not

occur until they are graduated and begin their professional careers.

At least two interpretations are possible for the reduced second-year correlation coefficient for the disadvantages of dentistry inventory. The reduction is possibly a statistical artifact resulting from the character of the rank order correlation statistic. While no item changed significantly according to Wilcoxon analyses, minor differences could have produced shifts in rank ordering that disproportionately affected the correlation coefficient. If so, the trend toward stabilization evident in related orientational spheres also extends to this one.

On the other hand, the findings may accurately reflect a moderate decline in consensus with the faculty. The impact of clinic experience remains obvious in this area and perhaps had the effect of reducing congruence between student and faculty views. Faculty definitions and clinic experience can and often do exert parallel influence upon the students, but they may also diverge and conflict. For the students the negative realities of the treatment setting are fresh, vivid and perhaps often unsettling. Faculty members have had years to adjust and therefore find the negative aspects less important. Thus, the impact of clinic experience may be such that students become less similar to the faculty in their views at this point in their training.

The continued impact of clinic experience is supported by the fact that items ranked highest in the inventory of disadvantages are still treatment oriented. Further support is provided by responses to open-ended questions. They reflect greater understanding of the difficulties and challenges of dentistry, such as

hard work, dealing with patients and the extensiveness of unmet needs for dental care and treatment.

Evidence for clinic impact upon self perceptions is rather clear although sometimes indirect. The findings reveal a pattern of continuous and fairly rapid change in the direction of self identification with the concept of dentist rather than student.

Associated with change in self conceptualization are significant alterations in the perceived evaluations of patients and faculty. From the outset the subjects projected higher placement by patients and lower placement by faculty. Self placement at a point between the two probably reflects the impact of two divergent perceptions and the attempt to establish something of a consensual compromise between the perceived evaluations of two categories of significant others.

The continued rise over time in projected placement by patients indicates that actual experience with patients in clinic settings validated the subjects' views that patients would see them more as dentists than as students. Moreover, perceptions derived from these experiences exerted pressure upon the students to assume more fully the roles and self identities attributed to them by patients.

Further evidence is drawn from comparisons of results of this study with those of Quarantelli's (1967). Subjects in the latter investigation did not begin clinic activities until their third year in dental school and their self concept scores were substantially lower at comparable points in time than those of the subjects in the present study.

Finally, rather direct support for a conclusion of patient influence is seen in the responses to open ended questions specifically aimed at this issue. Generally these reveal growing confidence and

competence in fulfilling professional role expectations. The students saw themselves as distinctly more professional in the dentist-patient role relationship.

The conclusion that structuring the educational process to provide early experience in occupational role enactment affects students' occupational self identification is supported by Kadushin's (1969) study. He reports that students from professional schools of music who participated in such activities as part time work in orchestras identified themselves more closely with their professions than did their fellow students who lacked this practical experience. They viewed themselves more as professionals and had higher appreciation for their occupation.

To summarize, the results of this investigation indicate that altering the traditional structure of occupational socialization by early introduction of an application component such as clinic training has an appreciable impact upon those who are being socialized. There is an apparent relationship between clinic experience and changes in two attitudinal spheres, occupational orientation and professional self identification.

One insight gained from the study is that occupational socialization is extremely complex. It involves acquisition of appropriate theory and technical skills, adoption of social roles and alterations of self concepts in the transformation of recruits into practitioners. This multifaceted process is affected by a number of factors which are interrelated in complex patterns. Variation of any major factor may result in numerous changes in the total process.

The changes introduced by altering the timing of clinic experience apparently are not the same for all component aspects of socialization. Some areas of occupational orientation were unaffected; some changed significantly for a time and then stabilized, and others perhaps continued to change. The sphere of professional self conceptualization followed a pattern of continuous, linear adjustment. All of this suggests that a single structural change will have no impact upon some aspects of socialization, will affect others only for a time or up to a given point, will continue to influence still others, and often will interact with other variables in a multifactorial pattern of influence. An additional factor which emerged in this study, for example, was faculty influence, which interacted with patient influence in a varied ways to affect the attitudinal patterns observed. Thus, the traditional view of occupational socialization as a linear process involving a series of a clearly defined steps or stages and reaching consumation at graduation is clearly inadequate.

The implications of these conclusions for medical professions are uncertain. Apparently it is possible to foster earlier adoption of certain professional attitudes and role identifications by structural change. Whether this is an entirely positive development or not is open to question. Kadushin (1969) found that earlier adoption of professional roles and self identities was accompanied by lower regard for student roles and declining academic performance. It is unknown whether these results would hold for students in medical professions or what the consequences might be. Obviously much more information is needed before adequate evaluations can be made.

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